TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

WSD PROGRAM STAFF GUIDANCE

PASS-THROUGH CAPACITY REQUIREMENTS FOR SERVICE PUMPS

Rule Affected: Title 30 Texas Administrative Code §290.45

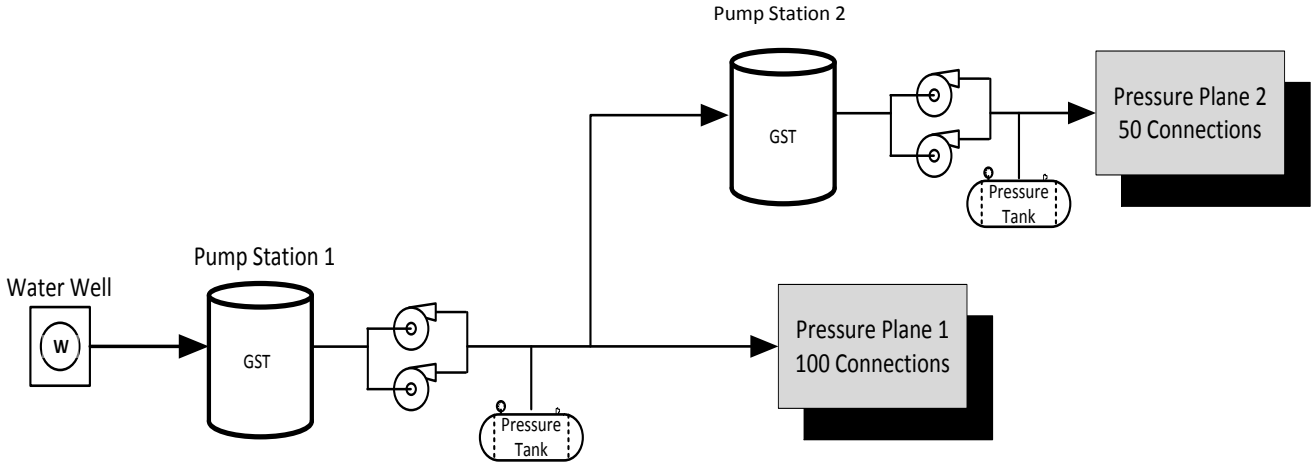
Background:

This guidance clarifies the additional capacity requirement for those service pumps that are used to:

1. Meet peak hourly demand for the connections in one pressure plane. Total capacity requirement is 2.0 gallons per minute (gpm) per connection or 0.6 gpm per connection for systems that provide an elevated storage capacity of 200 gallons per connection at that pressure plane.
2. Pass-through a supply of water to other pressure planes to meet their maximum daily demand. Total capacity requirement is 0.6 gpm per connection.

Guidance:

Example 1: Consider a situation where a well pumps water directly into a ground storage tank located at Pump Station 1. Pump Station 1 distributes water to 100 connections in Pressure Plane 1 **and** provides water to a storage tank located at Pump Station 2. Pump Station 2 distributes water to 50 connections in Pressure Plane 2 with no other source of supply. Since Pump Station 1 provides a supply of water to other pressure planes, the service pump capacity at Pump Station 1 would need to be adequate to meet the demand for Pressure Planes 1 **and** 2:



Total well capacity

(0.6 gpm/connection)(150 connections) = **90 gpm**

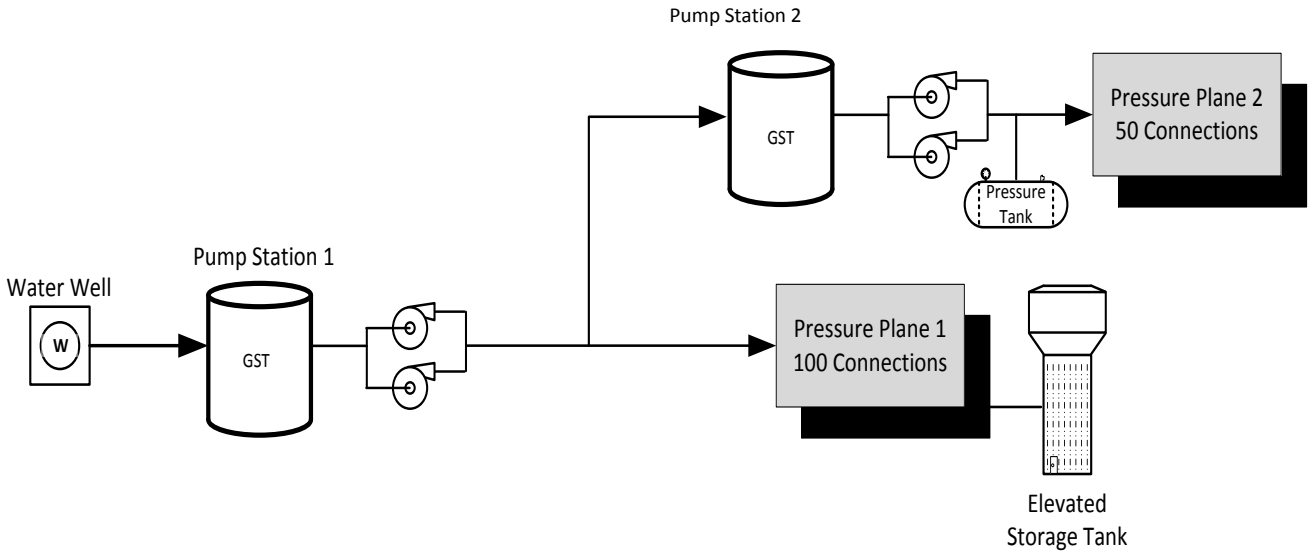
Service pump capacity at Pump Station 1

$$\underbrace{(2.0\ \text{gpm/connection})(100\ \text{connections})}_{\text{Capacity for Pressure Plane 1}} + \underbrace{(0.6\ \text{gpm/connection})(50\ \text{connections})}_{\text{Capacity for Pressure Plane 2}} = \mathbf{230\ gpm}$$

Service pump capacity at Pump Station 2

(2.0 gpm/connection)(50 connections) = **100 gpm**

Example 2: Consider a situation where a well pumps directly into a ground storage tank located at Pump Station 1. Pump Station 1 distributes water to 100 connections in Pressure Plane 1, an elevated storage tank (30 MG) and provides water to a storage tank located at Pump Station 2. Pump Station 2 distributes water to connections in Pressure Plane 2 with no other source of supply. Since Pump Station 1 provides a supply of water to other pressure planes, the service pump capacity at Pump Station 1 would need to be adequate to meet the demand for Pressure Planes 1 and 2:



Total well capacity

(0.6 gpm/connection)(150 connections) = **90 gpm**

Service pump capacity at Pump Station 1

$$\underbrace{(0.6\ \text{gpm/connection})(100\ \text{connections})}_{\text{Capacity for Pressure Plane 1}} + \underbrace{(0.6\ \text{gpm/connection})(50\ \text{connections})}_{\text{Capacity for Pressure Plane 2}} = \mathbf{120\ gpm}$$

Service pump capacity at Pump Station 2

(2.0 gpm/connection)(50 connections) = **100 gpm**

Finalized and Approved by:

Ada Lichaa P.G., Plan and Technical Review Section Manager, 09/23/2013

If no formal expiration date has been established for this staff guidance, it will remain in effect until superseded or canceled.

Revision History:

Date	**Action**	**Action by**
xx/xx/2009	Approved	Elston Johnson
08/14/2013	Revised	Yadhira A. Resendez
09/23/2013	Approved	Ada Lichaa
6/10/2014	Revised Format	Tamira Konkin-Garcia